High Fidelity Speaker Systems

Interface:C Series II

Interface:C
Series II

Don't settle for less than an accurate speaker

"Accurate" means a lot of things. Of course it means that a speaker can reproduce the highest and lowest frequencies of music. And it means that response is smooth and sounds natural.

But most manufacturers conveniently ignore an important aspect of accuracy – conversion efficiency. This means the ability to reproduce the volume of live music in your home without an impossibly large and expensive amplifier.

In every one of those respects, the Interface: C Series II is a highly accurate speaker.

Bass

The Interface: C's bass response is exceptional – just 3 dB down at 30 Hz. And at those low frequencies, the Interface: C can still deliver a sound pressure level of 102 dB. (Compare that with most speakers. They can barely produce 100 dB long-term levels in the midrange, and roll off in maximum output ability at low frequencies.)

The Interface: C can deliver more output at lower frequencies than ordinary speakers. So you'll hear bass like you've never heard it before. Like the physical sensation of a kickdrum or the room-shaking rumble of a pipe organ pedal note. This kind of solid foundation is an important part of accurate musical reproduction, and you'll hear, and feel it with the Interface: C.

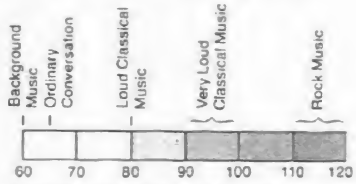
Specifications:

Frequency Response:	25-20,000 Hz; ± 2.5 dB 30-18,000 Hz, 1 meter on axis
Horizontal Dispersion Angle:	160° ± 8° in the 500-4,000 Hz octave bands; 90° in the 8,000 Hz ⅓-octave band; 75° in the 12,500 Hz ⅓-octave band
Recommended Amplifier Power:	2.8 watts per channel minimum; 350 watts maximum
Sound Pressure Level:	93 dB at 1 meter, 1 watt in
Midband Sound Pressure Levels in a Typical Listening Room:	90 dB average, 100 dB peak with a 2.8-watt amplifier; 111 dB average, 121 dB peak (10 ms) with a 350-watt amplifier
Maximum High-Frequency Sound Pressure Level in a Typical Listening Room (10,000 Hz):	111 dB long-term average
Power Capacity (30-2,500 Hz):	35 watts long-term average; 350 watts peak (10 ms)
Crossover Frequencies:	42 Hz acoustic; 400 & 2500 Hz electrical
Transducers:	10" woofer; 6½" vented midrange (VMR™ II); 1½" Super-Dome™ tweeter with acoustic lens
Impedance:	6 ohms nominal; 4 ohms minimum
Size:	31½" x 20" x 12½"
Cabinet:	Walnut veneer
Weight:	60 lb

The vented midrange

The efficiency and high output ability of the woofer made almost impossible demands of the midrange. In fact, it would have been impossible to design a midrange driver of reasonable size, high efficiency, high output and low crossover point using conventional speaker technology. So we designed our midrange using the same optimally vented technology we pioneered for woofers (the system explained on the back of this brochure), by adapting a design incorporated in our top-of-the-line Interface: D. We call it VMR™ II.

The VMR II uses a large 5-pound, 12-ounce magnetic structure that is essentially identical to that employed in the Interface: C woofer. So it can deliver long-term sound pressure levels of up to 111 dB and peaks up to 121 dB. At the same time, its small 6½" cone provides excellent dispersion over its entire frequency range.



Average sound pressure levels (volume), in dB.

Without vented technology, a small cone couldn't produce high sound pressure levels at low frequencies – it just couldn't move enough air. But the self-contained, vented enclosure solves that problem. The enclosure and vent size are critically selected

so at low frequencies, a small movement of the cone produces a large movement of the air in the vent. Over the lowest octave-and-a-half of the midrange, the vent itself provides most of the system's output.

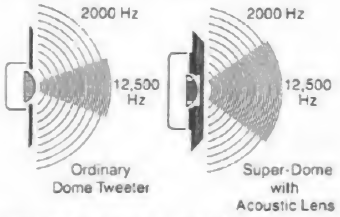
The exceptionally low crossover (400 Hz) made possible by the optimally vented midrange has an important audible result. There is no crossover in the most critical part of the vocal range. With VMR II, you'll hear an almost unbelievable clarity and definition. It's the "sweetness" many audiophiles associate with electrostatic speakers, but without their inherent weaknesses.

The Super-Dome™ Tweeter

Electro-Voice engineers faced the same challenge when designing a tweeter for the Interface:C. That is, a tweeter would be capable of matching the performance of the woofer and newly-designed vented midrange. The result of their efforts is Super-Dome.

Super-Dome not only has the superior sonic quality of a high-performance dome tweeter, but it also is as efficient as a conventional cone-type tweeter – two to four times the efficiency of a conventional dome. E-V engineers also increased the power handling capacity of Super-Dome to 25 watts long term! That's five times the rating of most conventional tweeters.

The result can be heard. Super-Dome has the same efficient performance as the rest of the Interface:C system, so as not to degrade the high frequency content of your music. Its incredible power handling capacity is also able to take the high energy levels found in many contemporary recordings in stride; without distortion; and without the fear of tweeter "burn-out."



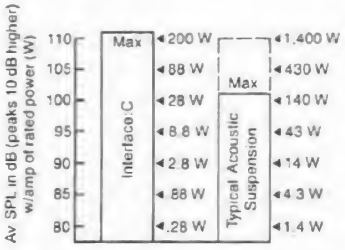
The Interface acoustic lens improves dispersion in the highest octaves.

Unfortunately, the same factors that combine to produce high efficiency and high power handling capability usually work against wide, uniform dispersion at high frequencies. E-V engineers developed an exclusive acoustic lens made from high-density Acoustifoam™ to solve this problem. The lens is acoustically transparent at lower frequencies, where dispersion is no problem. At high frequencies, however, the lens becomes acoustically opaque, thus reducing the effective dome diameter and vastly improving high-frequency dispersion.

The result is the wide, uniform high-frequency dispersion that you need for precise localization of sound, both lateral and front-to-back.

Efficiency

The Interface:C is as efficient as a recording studio monitor. Just 2.8 watts per channel will produce a 90 dB average sound pressure level.



Interface:C gives you more volume at lower power than acoustic suspension speakers.

As this chart shows, you'd have to put more than five watts into an acoustic suspension speaker to get the same volume as one watt into an Interface:C. You can also see that in order to make that acoustic suspension speaker play as loud as the maximum output of the Interface:C, you'd have to use a 1400-watt-per-channel amplifier! Even if an amplifier like that existed, you'd end up with smoke, not music, because the acoustic suspension speaker just couldn't handle that much power. But with the Interface:C, you can reproduce music at live volume with an amplifier of reasonable size.

The challenge

Lots of competitive speakers talk about accuracy. But we don't think a single one of them can deliver the efficiency, high output and smooth, wide-range frequency response of the Interface:C. Why settle for less?

The equalizer

A small, electronic equalizer is an integral part of the Interface:C's design. Primarily, it provides a slight low-frequency boost which extends bass response without increasing the size of the cabinet. (The same bass response in an unequalized system would have required an enclosure more than twice as large.) In addition, an active filter in the equalizer eliminates subsonic noise which would otherwise distort the audible bass. A high-frequency control on the front panel tailors the speakers' output to the acoustics of the room.

The equalizer comes complete with cables and can easily be installed in the tape monitor circuit of your amplifier or receiver or between your preamplifier and power amplifier.

Equalizer Specifications:

Total Harmonic Distortion:
Less than .01%, 1 V RMS input, 20-20,000 Hz

Intermodulation Distortion:
.005% 1.5 V RMS equivalent sine wave input

Maximum Input Signal:
7 V RMS sine wave, midband

Noise Output:
80 dB below 200 mV, 20-20,000 Hz bandwidth

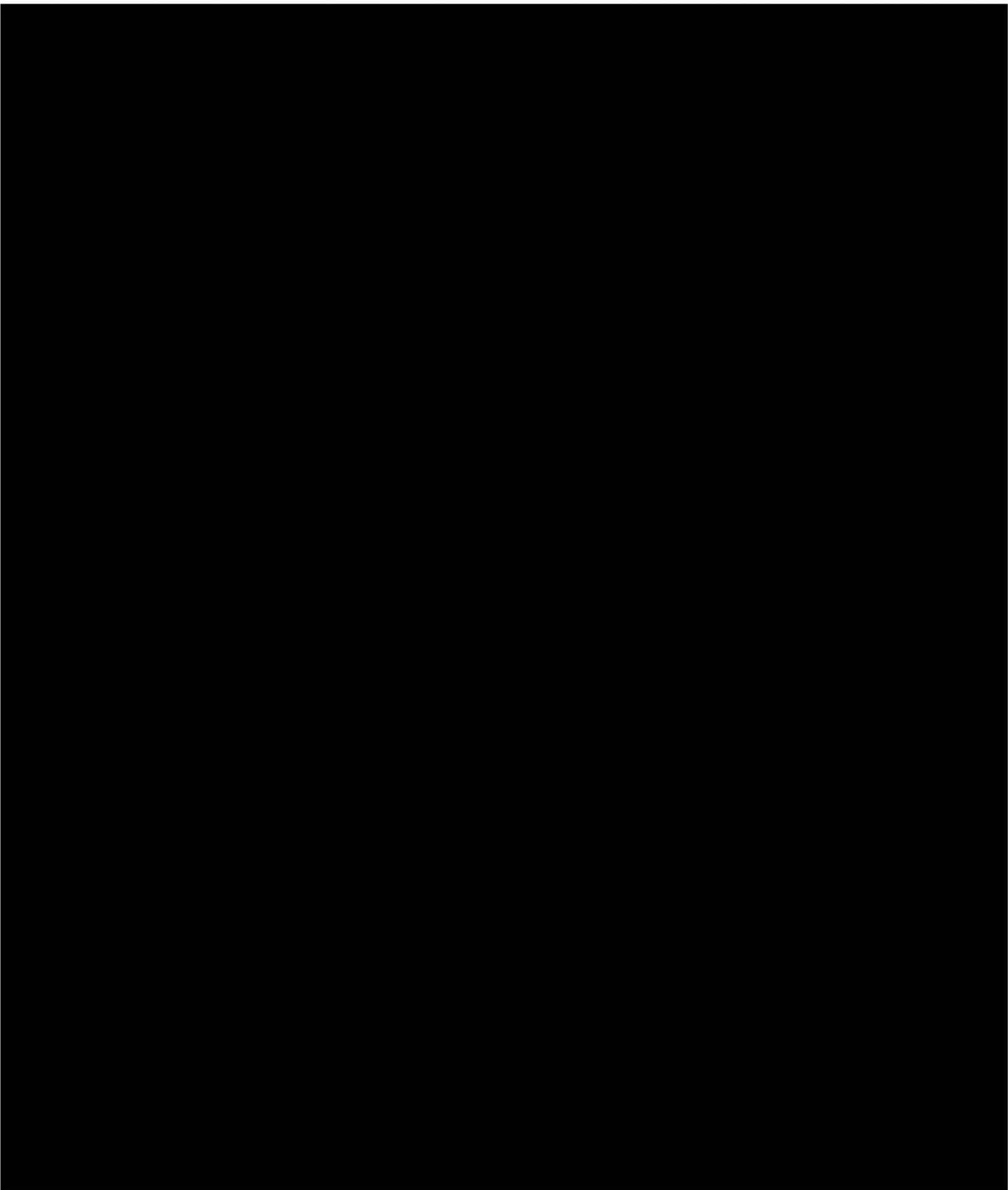
Controls:
High Frequency Slope (Power Off, 0 dB, –3 dB, –6 dB at 10,000 Hz); Tape-Source

Power Requirement:
110/120 V, 50/60 Hz, 3 W

AC Accessory Outlet:
200 W unswitched

Dimensions:
2"x 8"x 7" hwd

For complete speaker and equalizer specifications and a detailed description of test conditions, send for an Interface:C Series II owner's manual.



Before you build great speakers, you've got to have a system.

Most speakers use one of two basic design systems. The first, acoustic suspension, uses a sealed enclosure. The second, bass reflex, is characterized by a hole (also called a vent, duct or port), in the enclosure.

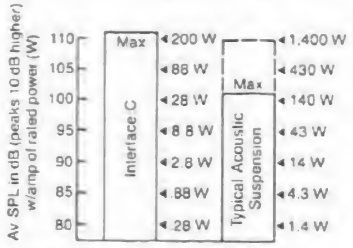
Both systems have definite weaknesses. Acoustic suspension speakers can provide good bass response only if they are inefficient. They also demand such long cone excursions that distortion is inherently high. Bass reflex speakers are typically more efficient, but lack deep bass, and suffer from bumps in their response curve.

A better way

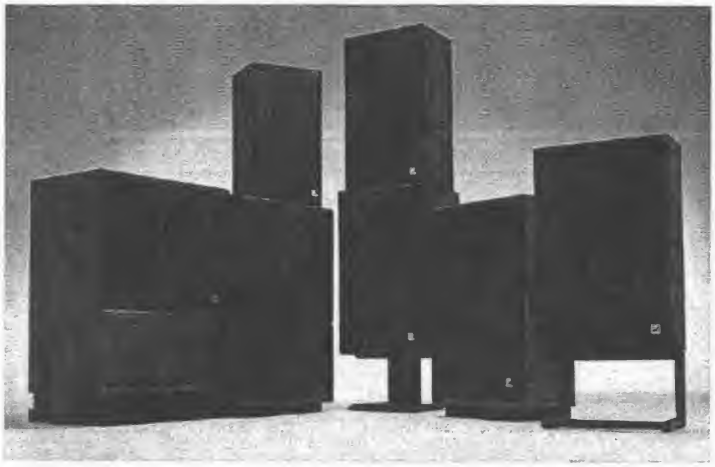
Electro-Voice pioneered a third way to design speakers. We call it "optimally vented design," and every Interface speaker uses it. It's based on the sophisticated scientific analyses of an Australian scientist named A.N. Thiele (pronounced Teel). This way of designing speakers has so many advantages, it makes the other systems obsolete.

Efficiency

Interface:C is up to 7 dB more efficient than an acoustic suspension speaker. That means one watt into an Interface speaker produces exactly the same volume as ten watts into an acoustic suspension system.

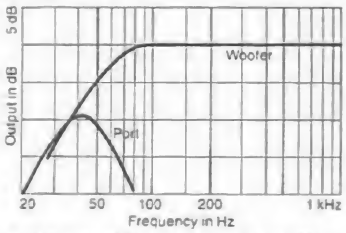


Interface:C gives you more volume at lower power than acoustic suspension speakers.



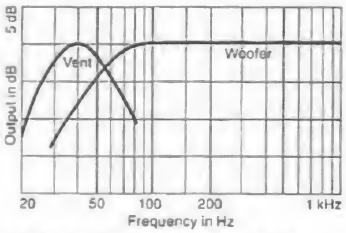
Bass...really

Here's a typical bass reflex frequency response curve. The red parabola is the acoustic output of the port. Unfortunately, its volume is so far below the woofer's that it adds little, if any, audible bass.



Typical bass reflex speaker. You can't hear the output of the port.

But in an optimally vented Interface speaker, the output of the vent matches the woofer's output. So the vent actually acts like a second woofer which significantly improves the bass response.



Interface optimally vented speaker. The vent acts like a woofer.

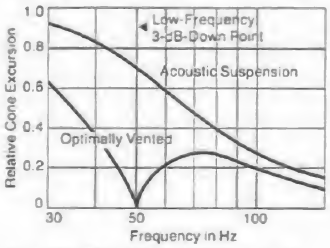
How can a hole do that?

At mid and high frequencies, the air in the vent is too heavy to move. But, if the speaker has been optimally designed, a very small movement by the woofer at low frequencies produces a very large movement of the air in the vent. The air in the vent moves in and out like a piston (exactly like a speaker cone).

So Interface speakers provide exceptional bass no bass reflex system can match. An acoustic suspension system would have to be four times the size of a vented and equalized Interface speaker just to have the same bass response and efficiency. Those aren't opinions, they're scientific facts. It's part of our system.

Low distortion

This chart shows that an acoustic suspension or bass reflex woofer has to move farther and farther to reproduce lower frequencies. So distortion goes higher and higher. But an optimally vented woofer's excursion actually decreases at lower frequencies. The vent does most of the work, leaving the woofer free to handle the important upper bass and midrange. That means lower distortion and more accurate sound.



Our optimally vented speaker has lower cone excursion because the vent does the work.

Wide dynamic range

Interface speakers are rugged as well as efficient. You can play your music at a realistic volume if you want to, and you'll have amplifier power left to reproduce musical peaks – like the thump of a kick drum or the attack of a brass ensemble. Instead of distortion (or a burned out speaker), you'll hear the effortless, natural sound of live music.

Accuracy

We've also designed accuracy into every Interface speaker. We've paid close attention to crossovers, smooth frequency response, wide dispersion, uniform total acoustic power output, and we don't believe in the "east coast/west coast sound" or in "rock" or "classical" speakers. We make accurate speakers – speakers that sound like music.

Why buy any other speaker?

Our optimally vented "system" gives Interface speakers a lot of advantages – efficiency, wide dynamic range, deep bass, low distortion and accuracy. So if you're serious about getting the best sound for your money, you want Interface speakers.

Electro-Voice continually tries to improve existing products, as well as to create new ones. So, the specifications in this Interface brochure are subject to change without notice.

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